Chapter 11
Moderate Risk Waste Plan

Introduction

The *Moderate Risk Waste (MRW) Management Plan for Clark and Skamania Counties* was developed in 1988 in response to RCW 70.105.220, requiring all local governments to implement moderate risk waste plans. The term "moderate risk waste" refers to household waste with hazardous characteristics, and hazardous waste from businesses, which do not generate more than 220 pounds of dangerous waste in any one-month or batch, or 2.2 pounds of extremely hazardous waste in any one month or batch or accumulate more than 2,200 pounds at any one time. Moderate risk waste can be hazardous to human health, wildlife, or the environment, but it is conditionally (or categorically) exempt from the State's Dangerous Waste Regulations, Chapter 173-303 WAC. Moderate risk waste includes hazardous (toxic, corrosive, flammable, and reactive) wastes generated by households (referred to as household hazardous waste or HHW) and by businesses which generate only limited quantities of hazardous waste (referred to as small quantity generators or SQGs). Common examples of MRW include paint, pesticides, solvents, antifreeze, cleaners, drain opener and hobby chemicals.

Moderate risk waste has been specifically defined by RCW 70.105.010 (17) to mean:

- Any waste that exhibits any of the properties of hazardous waste but is exempt from regulation under RCE 70.105, solely because the waste is generated in quantities below the threshold for regulation.
- Any household wastes that are generated from the disposal of substances identified by the department as hazardous household substances.

Since HHW and SQG hazardous wastes are specifically excluded from the State's hazardous waste regulation, they are regulated as solid wastes, regulated primarily by local governments. The 1988 Plan designated the Southwest Washington Health District (Health District) as lead implementation agency. It was adopted by all jurisdictions within Clark and Skamania Counties and by the Health District Board of Health; it was subsequently approved by the Department of Ecology in 1989. As lead agency, the Health District had responsibility for coordination and implementation of all elements of the Plan with the exception of the operation of the household hazardous waste collection facilities until 1997. At that time, the Plan was amended to have Clark and Skamania Counties assume the roles of lead agency for their respective counties. There have been six amendments to the MRW Plan since 1989.

Originally written as a 5-year regional plan, the MRW Plan is now in its 11th year. The

original objective "to reduce the disposal of moderate risk waste in landfills, public sewer systems, septic systems and on all other lands" is still applicable but conditions, problems and needs have changed enough to warrant an update. This updated MRW Plan will be integrated into the 2000 Clark County Comprehensive Solid Waste Management Plan as the Moderate Risk Waste Chapter. This Moderate Risk Waste Plan was prepared according to the Guidelines for Development of Local Hazardous Waste Plans (Washington State Department of Ecology #93-99) and will serve as the guiding MRW Plan until replaced or changed through the Comprehensive Solid Waste Management Plan update or amendment. State law (RCW 70-105) requires that the County implement certain activities to meet the criteria of Local Hazardous Waste Plans. In order for the County to be in compliance with State law, these activities will continue to be implemented before and after the study. These activities are: managing generated MRW (including an assessment of quantities, types, generators and fate of HHW and MRW); ongoing public involvement and public education (including potential hazards to health and environment; proper methods of handling, reducing, recycling, and disposal; an inventory of existing generators and hazardous waste management facilities).

Regulations And Regulated Sites

This section summarizes the federal, state and local regulations that govern or affect management of HHW and SQG hazardous waste and notes, purely for information, Federal and State regulation of certain generators, transporters, treatment and storage facilities, and sites related to hazardous wastes. These generators, transporters, treatment and storage facilities, and sites do not fall under the authority of this plan.

Federal Regulations:

Resource Conservation and Recovery Act (RCRA), passed in 1976, is the primary federal legislation addressing solid and hazardous waste management. RCRA provides a comprehensive framework for managing solid and hazardous waste with the intent of eliminating or minimizing public health threats and contamination caused by these wastes.

Universal Waste Rule, adopted by the EPA in 1995, streamlines regulation of certain hazardous wastes, including specific types of batteries, pesticides and mercury-bearing thermostats.

Clean Air Act regulates air pollutant emissions, establishing standards of performance for new municipal solid waste landfills and emission guidelines for existing landfills.

Mercury-Containing and Rechargeable Battery Management Legislation, passed in May 1996, regulates the labeling of batteries; use of rechargeable batteries and used nickel-cadmium batteries and prohibits the sale of batteries with mercury.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as Superfund, provides for the cleanup of sites contaminated by hazardous waste.

Superfund Amendments and Reauthorization Act (SARA) was passed in 1986. SARA Title III, the Emergency Planning and Community Right-to-Know Act, established

requirements related to emergency planning notification, emergency release notification and reporting of chemical releases by industry for community right-to-know information.

Other Federal Laws

Clean Water Act regulates discharges to waters through: (a) the National Pollutant Discharge Elimination System (NPDES), a permit program and (b) pretreatment standards that regulate discharge to publicly owned waste water treatment facilities.

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) regulates the manufacture, use, application and disposal of pesticides.

Hazardous Materials Transportation Act and the **Hazardous Materials Transportation Uniform Safety Act** regulate the transportation of hazardous materials, including wastes.

Safe Drinking Water Act sets maximum contaminant levels for drinking water supplies, including surface and groundwater sources.

Toxic Substances Control Act (TSCA) regulates the manufacture, distribution, use, processing and disposal of chemical substances and mixtures posing unreasonable risks of injury to human health or the environment.

State Regulations:

Solid and hazardous wastes are regulated in Washington State through a variety of statutes and regulations, found in the Revised Codes of Washington (RCW) and Washington Administrative Codes (WAC).

Solid Waste Management Reduction and Recycling Chapter 70.95 RCW regulates solid waste handling and disposal. This law requires the development of a statewide solid waste management plan and local solid waste management plans. It also requires the establishment of minimum functional standards for solid waste handling and disposal and criteria for siting solid waste facilities. This statute establishes a waste management hierarchy similar to HWMA, waste prevention and recycling are its highest priority management options and land disposal its last option.

Hazardous Waste Management Act (HWMA) regulates the transportation, treatment, storage and disposal of hazardous waste. This statute establishes a waste management hierarchy, with waste prevention and recycling as the highest priority management options and land disposal as the last option. The HWMA also defines MRW and requires a local hazardous waste (MRW) plans and their implementation.

Dangerous Waste Regulations, WAC 173-303, address the designation of dangerous wastes and requirements for generators, transporters and facilities handling or managing these wastes.

Model Toxics Control Act (MTCA), RCW 70.105D, provides for the identification and cleanup of hazardous waste sites in Washington State. The act assigns liability to certain parties for damages to the environment and human health, provides enforcement authority for the Department of Ecology and establishes penalties for failure to comply with Ecology's orders.

Used Oil Recycling Act, RCW 70.95, requires local hazardous waste management plans to include a used oil recycling element. This element must address methods to achieve the 80% household or "Do-It-Yourselfer" used oil recycling goal established in the Act.

Transportation Regulations. Washington State Department of Transportation (WDOT), which adopted Federal DOT regulations, requires hazardous waste transporters to take a hazardous materials shipping and transportation safety course.

Health and Safety Regulations. The Washington Industrial Safety and Health Act (WISHA), adopted from the Federal Occupational Safety and Health Act (OSHA), governs exposures to hazardous chemicals. WISHA requires employers to provide hazardous substance training and information under "worker right-to-know" laws to their employees. WISHA also requires workers who handle or come into contact with hazardous material/waste to receive special training regarding the use, management and disposal of hazardous material/waste.

Local Regulations:

Numerous local government agencies have regulatory authority that affects the handling and disposal of HHW and SQG hazardous waste. Key local ordinances relating to the management of these waste streams are listed.

Critical Aquifer Recharge Areas (CARA) Chapter of the Clark County Code 13.760, adopted in 1997, requires that "potential contaminants," including hazardous substance spills, leaks and discharges, be limited within designated CARA. The County offers incentives, education and technical assistance to businesses for hazardous waste management.

Enforcement Regulation No. 96-01, adopted by the SWWHD in 1996, applies to moderate risk waste enforcement activities and provides enhanced enforcement capabilities for staff.

Land Use and Zoning Ordinances 18.104, 18.313, 18.314 and 18.315, of Clark County, specify areas in which hazardous waste treatment, storage and disposal is allowed. Other local jurisdictions have the same types of ordinances.

Stormwater Control Ordinances. Clark County and the City of Vancouver Stormwater Control Ordinances, adopted in 1994 and 1995 respectively, require the installation and maintenance of oil and water separators in certain areas and for certain types of development.

Used Oil Recycling and Disposal Ordinance was adopted by the Southwest Washington Health District (SWWHD) in 1994. The Ordinance, in compliance with the state Used Oil Recycling Act, requires motor oil retailers to post signs about local used oil recycling locations and to make reusable oil recycling containers available for purchase. This Ordinance also requires persons generating used motor or other lubricating oil through household activities to manage the waste oil properly. It provides for SWWHD to enforce the ordinance.

Water Quality Ordinance County Code Chapter 13.26A, adopted in 1998 prohibits the discharge of pollutants to storm drains, surface water or groundwater, and requires the use of source best management practices to control discharges.

Regulated Generators, Transporters and Waste Management Facilities

As described in the section entitled "Federal, State and Local Legislation," RCRA and HWMA regulate hazardous waste from the point of generation to final disposal. Any business or institution that generates or transports regulated quantities of hazardous waste, or who owns or operates a hazardous waste treatment, storage or disposal facility must obtain an EPA/state identification number. Every business or institution with an EPA/state identification number must submit an annual report describing its hazardous waste management activities.

According to Ecology records there are about 500 businesses in Clark County that have obtained EPA/state identification numbers as of 1999. Compilations of the annual reports show that the businesses include fully-regulated hazardous waste generators, conditionally-exempt SQGs, as well as some entities who were a one-time only hazardous waste generator or who report having produced no hazardous waste during the previous year. Many of the businesses obtained their identification number as potential hazardous waste generators. A list of the businesses with EPA identification numbers is included in Appendice B.

Over 500 registered hazardous waste transporters operate in the State of Washington. Some of these transporters haul waste that is produced as the result of their own business or agency operations, while others provide a commercial service for waste transport. As of August 1999, there were two hazardous waste transfer, storage, or disposal facilities (TSDs) with EPA/state ID numbers in Clark County:

- Philip Services Corp. (formerly Burlington Environmental Inc.), Washougal;
- US DOE Bonneville Power Administration, Vancouver.

Federally Listed Sites

In accordance with CERCLA, the Environmental Protection Agency maintains a database of potential or known hazardous waste sites on the Comprehensive Environmental Response, Compensation and Liability Act Information System (CERCLIS). Sites come to the attention of EPA through notification by site owners, citizens, state and local governmental agencies and other sources. Included in the CERCLIS is the list of federal Superfund sites on the National Priorities List. These sites are listed as priorities for response, based on their potential threat to public health or the environment. Superfund site response may be under the authority of EPA, Ecology or be shared. As of the most recent update, April 1, 1997, there were 49 final, 12 deleted and one proposed site in Washington State, four of which were located in Clark County. The currently active National Priorities Lists sites and locations in Clark County are: Boomsnub/Airco, Vancouver; Frontier Hard Chrome, Inc., Vancouver; Vancouver Water Station #1 Cont., Clark County; Vancouver Water Station #4 Cont., Clark County. Current lists and information on the CERCLIS sites, listed by EPA, are available from the Region 10 office of EPA, 1200 Sixth Avenue, Seattle, Washington, 98101. The list of Superfund sites may also be reviewed or downloaded from the Internet, via the world wide web site located at http://www.epa.gov/eparegions/region10.html.

State Listed Sites

The Department of Ecology's Toxics Cleanup Program has prepared and regularly updates its "Confirmed and Suspected Contaminated Sites List." For each site, the report notes the status of site assessment or cleanup, whether or not groundwater, surface water, soil or sediment is contaminated or suspected of contamination and the types of contaminants suspected or confirmed. The Washington Ranking Method ranks each site on a scale of one to five. A ranking of one represents the highest level of concern to human health and the environment, relative to other sites; five is the lowest. Appendix C, "Confirmed or Suspected Hazardous Sites in Clark County," provides the May, 1999 list of hazardous sites in Clark County. Individuals interested in reviewing these lists or specific site information should contact the Washington State Department of Ecology Northwest Regional Office, 3190 - 160th Avenue SE, Bellevue, Washington 98008. To purchase a list, individuals should contact the Washington State Department of Ecology, Toxics Cleanup Program, PO Box 47600, Olympia, Washington 98504-7600. The "Confirmed and Suspected Contaminated Sites List" may also be reviewed or downloaded from the Internet, via the web site located at http://www.wa.gov/ecology.

Zone Designations

The State's Hazardous Waste Management Act distinguishes between two categories of hazardous waste management facilities and the process for siting these facilities. Ecology is required to site "preempted facilities," that is, those sites with particular state-regulated hazardous waste management activities. These activities include landfilling, incineration, land treatment, surface impoundment and the use of waste piles. Local governments are required to establish land use zones or geographic areas for siting "designated zone facilities," such as hazardous waste recycling, storage and treatment facilities. These local zoning requirements must be consistent with the state's hazardous waste facility siting criteria and must allow hazardous waste processing or handling where hazardous substances (such as raw materials) are processed or handled. Local governments are not required under the HWMA to develop land-use zones for siting designated zone facilities if they can show that, within their jurisdictions (1) no regulated amounts of hazardous waste were generated over the previous two years, and (2) no geographic area meets the state's siting criteria. Designated land-use zones or geographic areas, as well as requests for exemption from the zoning requirements, must be approved by Ecology. Ecology has the authority to establish zones for hazardous waste facilities or preempt local authority in communities that do not have approved land-use zones or geographic areas.

All jurisdictions in Clark County except for the City of Washougal have submitted a certificate of compliance, verifying the amended zoning language. Washougal's municipal code does provide for conditional use zoning for hazardous waste receiving, handling and disposal facilities under Chapter 18,42.030 "Conditional Uses." To comply with the zone designation requirements, Washougal should contact Ecology to certify compliance, bring their zoning into compliance, or request an exemption as provided for in RCW 70.105.225.

Existing Conditions

This section reviews the goals and recommendations of the previous (1989) MRW Plan and summarizes the accomplishments of the existing MRW programs.

Background: 1989 Moderate Risk Waste Management Plan

The Moderate Risk Waste Management Plan for Clark and Skamania Counties (MRW Plan) was developed in 1989 in response to RCW 70.105.220, which required all local governments to implement a moderate risk waste plan.

The MRW Plan was prepared by staff from the Intergovernmental Resource Center, with the guidance of a 14 member Hazardous Waste Technical Advisory Committee. The original objective of the MRW Plan, "to reduce the disposal of moderate risk waste in landfills, public sewer systems, septic systems and on all other lands", is still applicable.

Moderate Risk Waste Inventory

This section summarizes available information on the types, quantities and disposal methods of household hazardous waste and small quantity generator waste. The summary does not include information about used vehicle batteries managed by the private sector. RCW 70.95.610 - 650 established a system for collection and recycling of lead-acid batteries through private retailers; however, the quantity of batteries received by retailers in exchange for new batteries has not been tracked.

Household Hazardous Waste

Information about the types and quantities of HHW collected since 1990 comes from documents relating to collection events, fixed collection sites, used oil drop-off and curbside collection. In 1999, 1,468,395 pounds of household hazardous waste was collected. Information on the types and quantities of HHW disposed through other methods, including disposal through the municipal solid waste system, sewer and storm drains, on-site septic systems, burning or indiscriminate disposal on land or water is limited or unavailable. Municipal solid waste composition studies conducted in 1993 and 1995/96 indicate the quantities of hazardous waste found in the solid waste stream, by weight.

Waste Characterization Data.

Waste composition studies were conducted in 1993, 1995-1996 and 1999-2000 at the two in-county transfer stations. The studies were done by independent consultants under contract to Clark County. The analyses state the information on the hazardous waste stream does not have the same level of statistical certainty as that for primary materials. This is due to the smaller quantities and greater variability of hazardous materials in the waste stream compared to primary, non-hazardous materials.

Although its relative percentage of the entire waste stream is very small, there has been a noticeable decline in the occurrence of hazardous materials disposed for all three categories of residential generators. Table 11.1 shows the decrease.

Table 11.1
Estimated Pounds of Hazardous Waste Disposed in the Waste Stream by Residential Generators.

Generator Group	1993	1995-96	1999
Residential Single Family	2,404,690	2,566,520	5,340,000
Residential Multi-Family	1,296,780	722,400	1,100,000
Residential Self Haul	689,360	1,094,620	2,200,000

Treatment, Recycling, and Disposal.

In 2000, 530,973 pounds of household hazardous wastes were collected at the two HHW fixed collection facilities and the satellite collection events. An additional 717,810 pounds of used motor oil was collected through the curbside recycling program and drop-off locations.

Used Motor Oil.

In 2000, used oil was collected at eight drop-off collection sites at private businesses and two fixed HHW collection facilities, and through curbside recycling collection in the urban service areas. A total of 93,222 gallons of used oil was collected in 2000. This represents 28% of the estimated 335,910 gallons of used motor oil generated in 2000.

Small Quantity Generated Waste

This section provides an inventory of the small quantity generators in Clark County, an estimation of the quantity and types of waste produced and a summary of the methods for treating, recycling and disposing of their hazardous wastes.

Generators.

Of the approximately 17,000 commercial properties and businesses (2000 estimates) in Clark County, it is possible that over one-third produce hazardous wastes. Even though only 25% of services and trade businesses were found to be small or medium quantity generators (S/MQGs), there are so many businesses in those categories that together they represent 42% of the estimated number of S/MQGs in Clark County. Medium quantity generators produce 220 to 2,200 pounds of hazardous waste per month and less than 2.2 pounds of extremely hazardous waste per month; they are regulated under HWMA and RCRA. Small quantity generators can generate up to 220 pounds per month and accumulate up to 2,200 pounds of hazardous waste and less than 2.2 pounds of extremely hazardous waste per month; they are not regulated by HWMA when they meet the regulatory conditions of exemption. In order to estimate the number and type of SQGs in Clark County, the most recent "1994 Clark County Business Patterns" was used along with information from King County, Washington. King County has done one of the most thorough inventories of small quantity generators.

Quantities & Types.

Information characterizing the types and quantities of hazardous waste, produced by small quantity generators, is limited. Hazardous wastes can be managed in many ways including, but not limited to, the following: on-site treatment; collection by hazardous waste vendor or a "treatment storage and disposal" (TSD) facility; recycling; disposal in sewer, or at a solid waste facility.

Information is available regarding hazardous waste only collected through SGQ collection events or disposed of at solid waste facilities (disposal information regarding solid waste facilities is based on waste characterization data). Survey data are available from several sources outside of Clark County. Information about the other management methods is not available or is very limited.

Clark County collected SQG hazardous waste from 1993 through 1995 at Moderate Risk Waste Collection Events. In 1998 Clark County worked with the Columbia Resource Company (CRC) and Philip Services Corporation to establish SQG collections at the Central Transfer and Recycling Center.

Waste Characterization Data.

The analyses state the information on the hazardous waste stream does not have the same level of statistical certainty as that for primary materials. This is due to the smaller quantities and greater variability of hazardous materials in the waste stream compared to primary, non-hazardous materials. "Non-Residential Self-Haul" hazardous waste comprised 0.77% of the mixed municipal waste stream in 1993 and 0.7% in 1995.. In the "Other Non-Residential" waste stream, hazardous waste accounted for 1.27% of the waste stream in 1993 and 0.9% in 1995. In 1993 a total of 4,390,830 pounds of hazardous waste were disposed of in the solid waste stream; in 1995 a total of 4,383,540 pounds were disposed of in the solid waste stream. And in 1999, a total of 8,640,000 pounds were disposed of in the solid waste stream.

Survey Data.

The King County Local Hazardous Waste Management Program did the most recent SQG survey conducted in Washington State. It is assumed that businesses from the same SIC (Standard Industrial Classifications) code produce the same kinds of wastes, whether in Clark County or King County. However, quantities of wastes generated may vary depending on the sizes of businesses and processing techniques. The King County Local Hazardous Waste Management Program inventoried small and medium quantity generators from 1992 through 1996. MQGs were included in the inventory since generators can easily change status from SQGs to MQGs; the potential also exists for MQGs to become SQGs through improved hazardous waste management practices.

Treatment, Recycling and Disposal.

Information about final disposition of SQG hazardous wastes is limited to the waste manifest documents completed at SQG collection events that had been sponsored by SWWHD. Of the materials collected, antifreeze, non-contaminated used oil and some latex paint were recycled. The other wastes were treated, incinerated, landfilled or disposed of at a hazardous waste landfill. Information about the treatment, recycling

and disposal of SQG hazardous wastes that were collected by private hazardous waste service providers is not available.

Evolution of Existing Programs from 1989 MRW Plan Goals

The overall goal of the 1989 MRW Plan was to reduce the amount of hazardous waste in the solid waste and wastewater treatment systems. This goal was to be accomplished by reducing the amount of HHW and SQG hazardous waste being improperly disposed. During the first few years of MRW program implementation, MRW programs focused on disposal of hazardous waste in the solid waste stream. Because of the County's reliance on ground water for drinking water, this focus has now evolved to address surface and ground water quality protection and non-point source pollution prevention.

Moderate risk waste programs in Clark County have taken a variety of forms since the 1989 MRW Plan was implemented. Some activities have been combined with solid waste information programs, such as general waste management publications and handouts. Others have specifically targeted moderate risk waste from households and small quantity generators. Collection programs include collection events in 1990-1993, HHW fixed facility operation since 1993, satellite HHW collection since 1998, used oil collection drop-off centers since 1992 and curbside collection of used oil throughout the urban service area since 1992.

1989 Targets

The **household target, a 15% reduction**, was to be reached by increasing used motor oil recycling rates to 50%, car battery recycling rates to 95% and participation rates at the two drop-off facilities by 27%. In addition, product substitution and sharing were to be promoted as a way to reduce the amount of household waste generated.

The participation rate at the fixed HHW collection facilities in 2000 was 3,402 residents. This number does not include the number of residents participating in the 2000 satellite HHW collection events (270 participants) or the number of residents using the used motor oil collection sites (using 5-gallons as an average per participant, it is estimated that the oil from 18,000 vehicles was collected in 2000). The rate of participation at the fixed facilities does not show whether or not residents were repeat users of the facilities; however in 1995, 3,501 users of the HHW facilities were surveyed, and of those, 35% indicated they were repeat users. Even with a 35% repeat rate, the participation rates appear to be far greater than the targeted 18 households per week or 936 households per year. In addition, 270 residents participated in the 2000 satellite collection events.

The **business target, a 20% reduction**, was to be achieved through waste reduction and recycling encouraged by an active business technical assistance and education program, and, in addition, by encouraging the proper disposal of remaining wastes through an organized community pick-up service. Small quantity generator education programs and assistance have been available in a variety of forms since 1990. Small quantity generator hazardous waste collection events were held from 1993 through 1995, but were discontinued due to low attendance and funding concerns. Philip Services Corporation still offers SQG hazardous waste collection once per month, by appointment at its facility in Washougal.

2000 Targets

The **household targets:**

- Workshops/presentations per year – 10
- Number of People Receiving Education Material per year - 1,000-2,000
- Decrease in disposal costs each year by 10%
- Increase number of people using fixed facilities each year by 10%
- Increase in amount latex paint being recycled - 10%
- Increase tonnage collected by 10%
- Decrease Cost per participant and cost per pound by 10%

The **business targets:**

- Training workshops per year – 3
- Technical Assistance Visits per year - 125

Household Programs

Household Hazardous Waste Education Programs.

Written publications about household hazardous waste have been distributed to Clark County residents since 1990. The Clark County Recycling Directory (5,000 copies of which are printed and distributed annually) includes household hazardous waste information. In 1996, household hazardous waste information was distributed to local flood victims to instruct residents on the proper management of moderate risk waste in flood situations. In July of 1999, a series of six brochures (three on properly managing household hazardous waste and three on safer alternatives to hazardous products) was produced, with a printing of 5,000 copies of each brochure.

Local media have helped educate the public about moderate risk waste through periodic news articles and press releases. The local cable company also helped the Clark County Hazardous Waste Citizen Task Force write and produce two videos. The first, "Toxic Teens," was aired on the local cable station, played at community events and was distributed to middle schools in the County. The second video, "In My Own Backyard," will be aired on the local cable station and distributed to neighborhood associations and libraries.

Household hazardous waste educational presentations have been offered to Clark County residents since 1992. In the schools, presentations utilizing green cleaning kits, the "EnviroScape" and the "Groundwater Model" have been made to students from third grade through college level. Over 700 fourth grade students received special presentations and flyers about proper management of household hazardous waste at the annual Salmon Creek Water Festival in 1996; in 1998 over 11 classes of fourth graders participated in the Columbia River Watershed Festival. The Department of Ecology's "A-

Way with Waste" curriculum and the locally produced "Trash 'n Toxics" and "Toxic Teens" educational curricula have been used to educate teachers and students as well.

Public information was also distributed through the local Environmental Information Center and the Columbian Info-Line, both of which provide facts about moderate risk waste; the Master Composter/Recycler program, which has incorporated household hazardous waste information into its volunteer and public education programs; and the "Hazard Free Home" slide presentation. Local residents have also been educated about household hazardous waste through portable displays, available since 1992, and through presentations at community events.

Storm drain stenciling equipment has been made available to students, neighborhood associations, scout groups and other community groups since the MRW program was implemented. School and community groups have been stenciling 300 to 500 storm drains in the county each year with the message "Dump no Waste – Drains to Stream".

Household Hazardous Waste Collection Events.

Four collection events were held prior to the opening of the fixed HHW collection facilities in 1993. In 1998, rural HHW collection events were scheduled in the cities of La Center, Ridgefield and Yacolt, and in the communities of Fern Prairie, Hockinson, and Amboy. In 1999, a collection event in the community of Dollars Corner was added.

Household Hazardous Permanent Collection Sites.

Two fixed household hazardous waste collection facilities opened in 1993 in Clark County: Central Transfer and Recycling opened in January, and West Van Materials Recovery Center opened in March. Both facilities are owned by Columbia Resource Company and operated under contract to Clark County. Both are open to the public two days per week and accept up to 220 pounds or 25 gallons of household hazardous waste per visit at no charge.

A load inspection program at both transfer stations identifies non-acceptable wastes, including asbestos, hazardous materials and infectious waste. Hazardous materials that are discovered on the tipping floor are removed and handled properly through the HHW facilities. Although this sorting provides another level of protection for the landfill, it puts personnel at risk from potential accidental exposure to hazardous materials.

Used Motor Oil Drop Off Collections.

Clark County residents can drop off residential or "Do-It-Yourselfers" used motor oil at various sites, including private businesses (such as G.I. Joe's and Shuck's Auto Supply); the two transfer stations in Vancouver; County-sponsored drop-off stations in Yacolt, Hazel Dell and Vancouver; and Philip Services Corporation in Camas. Curbside collection of used motor oil is offered as a component of the curbside recycling program. Curbside collection of used oil began in 1992; in 1998, the curbside collection program served over 60,000 single-family homes and over 24,000 multi-family residential units. In 2000, over 93,000 gallons of used motor oil were collected in Clark County. From 1995 through 2000, the County has distributed reusable containers to households to collect used motor oil to take to the drop-off sites for recycling.

Used Oil Education.

A special effort has been made to educate Clark County automobile owners about the proper disposal of used motor oil. Education elements include a staffed display at community fairs and events, news articles, point-of-purchase display signs and bill stuffers. Reusable containers were distributed to Clark County homeowners in 1995 through 2000 at various community fairs. Information about used oil recycling is placed in the annual Curbside Recycling Newsletter to households with curbside recycling, and notices have been placed in Yacolt utility bills, the City of Vancouver newsletter and annual water quality report, garbage and recycling bills. Point-of-purchase signs are posted in retail outlets selling more than 1,000 gallons of oil or 500 filters, and in interested establishments selling smaller amounts.

Marketing Strategy for Re-Refined Oil.

Clark County continually promotes the purchase of re-refined motor oil and developed a purchasing preference for all types of recycled products, including motor oil. All County vehicles now use re-refined oil, at a rate of about 600 gallons per year. The SWWHD began using re-refined motor oil but has not passed a resolution encouraging other agencies to specify it. A motor oil/automotive waste exhibit was developed for public display, and the SWWHD hosted a re-refined oil workshop. Two automotive shops currently market re-refined oil for retail sales and for use in on-site oil changes.

Used Oil Ordinance.

An ordinance requiring point-of-purchase signs and reusable oil containers at oil retailers was completed in 1994, when the Board of Health adopted Ordinance 94-01, the Used Oil Recycling and Disposal Ordinance. The ordinance establishes fines for the improper disposal of used oil and requires retailers to post oil-recycling information and provide reusable containers.

HHW Task Forces.

The Hazardous Waste Agency Coordinating Committee and the Hazardous Waste Regulatory Task Force were established in 1990. These task forces were formed to review and update existing regulations, to develop model language for local hazardous waste ordinances or resolutions in year one and to clarify the enforcement responsibilities of the SWWHD and Ecology related to moderate risk hazardous waste.

Business Programs

Small Quantity Generator Education Programs.

Small Quantity Generator business technical assistance activities are directed at minimizing the use of products that produce hazardous waste and encouraging proper management of hazardous wastes when they are generated. Business technical assistance programs have been offered in Clark County since 1990. Services are provided through various means to SQGs throughout the County, and some programs have been developed to target specific types or categories of businesses. Education for

businesses is also available through advertising and through articles in the Vancouver Business Journal.

Workshops.

Special workshops for SQGs have been offered since 1992 by the department of Ecology.

Technical Assistance Visits.

Specific assistance was provided to auto repair shops, body shops, machine shops, auto dealers and salvage yards in cooperation with the Ecology "Shop Sweeps" program, 1992 and 1993. The "Snap Shots" program, also conducted in conjunction with Ecology, 1994 and 1995, provided on-site assistance to photo processors, lithographers and screen printers. And in 1996, a workshop was offered by Ecology especially for print shops. In 1998, Ecology with County staff, conducted a "Ship Shape" campaign to inspect marinas and boatyards. County staff also conducted 157 independent technical assistance visits in 2000.

Industry Fact Sheets.

Industry-specific fact sheets, describing waste minimization measures and proper disposal methods, were developed and distributed to businesses involved in commercial pesticide application, metal fabrication and wood furniture making.

Hazardous Waste Management Services Handbook.

A comprehensive, SQG handbook, including a hazardous waste management services directory, was initially developed for the region in 1991 and updated in 1994 and 1995.

Re-Refined Motor Oil.

Several Clark County agencies received information on the benefits of using re-refined motor oil. As of 1996, the County, SWWHD, Northwest Natural, Waste Management of Vancouver and the Vancouver School District fleet vehicles had all converted to using re-refined motor oil.

Telephone Information Line.

The SQG hotline was established in 1992. Calls from businesses primarily relate to hazardous waste management, disposal, containment, characterization and reduction. Most of the inquiries require some level of follow-up research and contact with the caller.

Collection Events.

Although an organized waste pick-up program for SQGs was discussed with a local hazardous waste contractor (Philip Services Corporation), a series of collection events was implemented instead. The two or three events per year (1994-1995) accepted moderate risk waste from SQGs located in Clark County. Generators paid waste transport and disposal costs; all other costs associated with these events were covered by the MRW program.

Fixed Collection Sites.

One day per month, Philip Services Corporation accepts SQG waste by appointment only. The SQG is charged the full cost of waste disposal ($25 minimum charge per visit). In 1998, Clark County worked with CRC and Philip to establish SQG collections at the CTR transfer station.

Database.

A database of hazardous waste information from businesses was developed and evaluated from 1991 through 1996. The database and the method of collecting information were revised several times, but never implemented. Activities were coordinated with the Department of Emergency Services and the SWWHD.

Home-based businesses.

Home-based businesses were to be targeted with education and information; this recommendation of the 1989 plan was not accomplished.

Compliance and Enforcement

Education to Obtain Compliance.

During implementation of the 1989 MRW Plan, emphasis has been given to expanding collection opportunities as well as providing education and technical assistance to businesses in the County to improve moderate risk waste management. Education is the primary means of obtaining compliance; enforcement action is used only in the event of serious or imminent threats to public health or the environment or in cases of repeated offenses. Education and/or enforcement are conducted during complaint investigations or on-site visits to businesses. Since Clark County has no regulatory authority over dangerous wastes, cases requiring enforcement action are referred to Ecology or other appropriate regulatory agencies; used oil disposal violations are enforced by the SWWHD. See the Enforcement Chapter for additional information about enforcement activities.

Compliance Workshops.

Dangerous Waste compliance workshops have been held annually by Ecology since 1992. The purpose of the workshops is to provide assistance and information about hazardous waste regulations and disposal and management requirements. They can be beneficial to businesses wishing to retain or obtain SQG status.

Enforcement Regulation.

Enforcement Regulation No. 96-01, adopted by the SWWHD in 1996, is a revised ordinance that applies to moderate risk waste enforcement activities. It provides enhanced enforcement capabilities for staff by establishing fines for the violations of public health regulations. The SWWHD's adoption of the regulation allowed the development of a "Notice and Order" to assist with enforcement and to help discourage illegal disposal of moderate risk waste.

Coordination with Other Local Plans

The Hazardous Waste Agency Coordinating Committee was established in 1990 and has met on an "as needed" basis. It was staffed by the lead agency for MRW programs (at that time the SWWHD) and consisted of representatives from each of the funding jurisdictions, as well as other agencies with an interest in moderate risk waste, including Hazel Dell Sewer District, Fire District 5 and Clark County Emergency Services. The purpose of the committee has been to coordinate and evaluate the implementation of the Moderate Risk Waste Program and to coordinate activities with other local programs related to moderate risk waste.

The Health District, Clark County Solid Waste and Clark County Emergency Services have worked together to prepare response plans in the event of a disaster. Disaster contingency planning for businesses has also been conducted.

Needs And Opportunities

This section explores the needs and opportunities of MRW management in Clark County. While there have been significant successes in managing moderate risk wastes in Clark County, there is a need to continue to seek more effective and efficient methods of protecting our County's water, land and air from contamination and our citizens' health. The opportunities for more effective and efficient management of hazardous waste lie principally in waste prevention, then in safe use and proper storage, and finally in responsible disposal. Once a product containing a hazardous material has been manufactured and purchased, it will impact the environment. The type and extent of that impact can be modified by properly directed management efforts.

While it is difficult to measure the effectiveness of waste prevention efforts, the cost of cleaning up soil and water pollution from improper use or disposal can be measured. Clean up costs are much higher than the cost of providing proper collection and disposal for the hazardous products used in the County. That cost, in turn, is much higher than the cost of educating and attempting to influence behavior changes for reducing the overuse, misuse, unsafe storage and improper disposal of hazardous materials.

The four basic goals of the MRW Plan are to:

- **Reduce the amount of hazardous products being purchased and the amount of hazardous waste being generated.** The use of alternatives to products containing hazardous materials, purchasing less hazardous or non-hazardous products or purchasing only the amount needed of a hazardous product are all ways to reduce the amounts of hazardous products being purchased and the amount of hazardous waste being generated.
- **Store hazardous products/waste in a safe manner.** Storing hazardous products/wastes in their original containers with proper labeling, out of reach of children or contact with animals, away from food or drink, and out of the elements will help protect humans, animals and the environment.

- **Use hazardous products appropriately.** Using hazardous products only according to the directions on the label, while considering weather conditions (e.g., don't apply liquid herbicides when it's raining) and environmental conditions (be aware of the proximity of wells and other water bodies) will help protect humans, animals and the environment.
- **Dispose of hazardous products/waste in a safe and responsible manner.** Use up all of a product, reuse a product, or take hazardous products/ wastes to a MRW collection facility where the material can be recycled, used as an alternative energy source, or otherwise disposed of in accordance with state and federal regulations.

Need for data. MRW programs are relatively expensive due to the broad audience that education programs attempt to reach and the high costs of disposal. In order to most effectively and efficiently allocate the County's resources, information is needed to monitor and evaluate MRW management programs and needs, and to focus program efforts accordingly. Evaluating existing programs and monitoring the needs of MRW generators would help to determine whether existing programs should continue or new ones should be developed.

Funding. During the first few years of program implementation, HHW programs focused on disposal of hazardous waste in the solid waste stream. Existing MRW programs have targeted broad HHW and SQG generator populations, supported by specific programs, such as workshops and technical assistance. Now that the broad programs have matured, additional effort will need to be made to further refine and target MRW programs. Due to the County's reliance on ground water for drinking water, the focus is evolving to address surface and ground water quality protection/non-point source pollution prevention. Examples of additional focused efforts could be:

- Sensitive geographic areas, such as well-head protection districts;
- Waste reduction efforts for items with high disposal costs or no recycling opportunities;
- MRW materials with the largest waste stream impacts;
- Moderate risk wastes that pose the largest threat to health and the environment.
- Cost effective recycling and disposal options.

The MRW program is funded primarily through the Coordinated Prevention Grant (CPG) from the Washington State Department of Ecology (see the chapter on *Funding and Finance* for more information about this grant). The County is required to provide a 40 percent match. In the past two funding cycles, the amounts have remained stable. In the past, Ecology has provided other funding sources: Referenda 26/39 funding for waste reduction and recycling capital grants ended as of June 30, 1997; other fund sources such as the Hazardous Waste Assistance Account and the Solid Waste Management Account are also no longer available. Given the breadth and scope of the MRW plan, and the number of hazardous products existing or coming into the waste stream, additional funding or recovery structures may be necessary.

Alternatives

The Solid Waste Advisory Commission reviewed the MRW Plan and considered the following Alternatives:

Information and Education Efforts: continuing to educate and inform the public about Moderate Risk Waste issues.

1. Program Focus.

The County shall develop, as needed, educational and information programs that target geographic areas, specific MRW materials, generator and residential sectors or a combination of all three.

A. Programs might focus on geographic areas and specific sub-areas such as wellhead protection areas. If the geographic areas were small enough, all SQG's within each area could be contacted and mailings or other outreach efforts could be developed for households. This focused effort could be used to support the development of a SQG/HHW database that would allow the County to identify MRW generation characteristics by geographic area or sub-area.

B. Programs might focus on specific MRW materials or on a specific target audience. Specialized promotion and outreach efforts could be developed for each targeted material or audience. Targeting educational programs by material also would allow the County to approach manufacturers' associations for technical and financial support. Priority could be placed on materials that pose particular disposal problems due to quantity, cost or toxicity.

C. Programs might focus on generator sectors. All MRW practices for each sector could be addressed at once. For example, specialized programs and educational materials could be developed for automotive service, photo finishers, dry cleaners, electroplaters and other generators likely to be SQGs. Ecology has produced guides for a number of generator sectors that could be adopted for this approach. Residential sectors such as the elderly, child care providers or homeowners could be targeted.

D. A combination of all three approaches could be used, depending on the mix of staffing, interagency cooperation and funding constraints. This program would require staff to identify and prioritize specific geographic locations, hazardous materials and the types of businesses or residential uses which pose the largest threat to human health and environment.

2. Informational/Educational Material.

A lack of participation in collection programs may mean that the general public doesn't know and/or understand the human health and environmental hazards that can result from the misuse and improper disposal of hazardous household products; or that the public is unaware of the County's HHW collection programs. With HHW collection program participation levels at 3.5%, there is still a need for education on proper disposal methods. A phone survey, conducted in 1997, indicated that only 40% of county residents were

aware that the HHW facilities exist. The County should continue to provide informational and educational handouts, newsletters, brochures, stickers, portable displays and videotapes to the public and to develop new material as needed.

3. *Workshops and Presentations.*

Solid Waste staff shall develop, as needed, workshops and presentations for targeted audiences such as realtors, childcare providers, elderly citizens, and homeowners. Education efforts will target the point of sale and lease of both residential and commercial property; the safe storage of hazardous products, the need to remove outdated or banned products form homes for proper disposal and suggestions for source reduction and recycling, as well as a list of disposal opportunities and options.

4. *Chemical-Free Gardening.*

Although garden and lawn chemicals comprise a comparatively small part of the total household hazardous waste stream, disposal costs for these wastes are very high. Improper use and disposal of these chemicals pose greater risks to human health and the environment than other components of the household hazardous waste stream. Therefore, additional programs are needed to support source reduction of gardening and lawn products and to encourage non-hazardous alternatives. The County is developing a chemical-free gardening program that will target households, school grounds maintenance, parks and public facilities. The County should also explore options to work with plant nurseries and local retailers to encourage them to non-hazardous or less hazardous products in their operations.

5. *Product Labeling.*

The County should support efforts to develop, as needed, a program that requires certain products to have labels specifying their hazardous nature. A successful demonstration of product labeling is the phosphate-content labels on detergent packages. The County's subjectivity to national and regional market forces may make local package labeling requirements difficult to implement.

6. *Bans and Limitations.*

The County and cities could work with the state and retail associations to develop bans and limitations on the sale and distribution of specific products that endanger the natural and human environment. For example, certain types of herbicides or pesticides may be banned because of their toxicity. Banning specific products could be hard to implement and enforce due to the flow of retail goods between Clark County and neighboring jurisdictions, especially Oregon.

7. *Licensing.*

The County could expand the use of licensing to further limit the purchase and use of pesticides and herbicides and other hazardous products. In order to purchase specific hazardous products, buyers would have to present a license or certificate which demonstrated prior training with regard to the use and disposal of the specific product. As an alternative to banning the sale of particular toxic products, licensing has the advantage of preserving the ability to continue use of products for which safe, suitable and cost-

effective alternatives do not currently exist, and also of avoiding some of the problems inherent in ban enforcement.

Business Assistance:

8 Technical Assistance Visits

Business technical assistance visits should be continued, targeting specific geographic locations and business sectors, with additional attention given to the construction sector. Technical assistance visits provide businesses with information on reducing, storing, using and disposing of hazardous products. Technical assistance visits also provide information about new waste reduction and recycling technologies that are not being used by the targeted businesses.

9. Web Sites

The County currently has two web sites; one general countywide services site; the other specific to public works services. Either of these sites is easily accessible to generators for information. A business web site should be developed to list available educational materials, upcoming workshops and conferences, hazardous waste service providers, names and phone numbers of staff to contact for technical assistance and links to related web sites. Other benefits of a web site are that it allows a business to obtain information without directly contacting a government regulator; it's accessible 24 hours a day; and it can be updated frequently.

10. Self Audits

The County should continue to supply self-audit materials that are supported by workshops, awards and a waste and recycling directory will help businesses to asset their MRW management needs. This approach is a cost-effective way to reach generators who are interested in regulatory compliance and willing to voluntarily research and implement MRW programs.

11. SQG Compliance Workshops.

The County could develop, as needed, compliance workshops for SQG's. These workshops will explain the complex legislation regarding hazardous materials and reinforce the benefits of retaining SQG status.

12. LINC.

The County should continue to meet with the Local Interagency Networking Cooperative to improve coordination with other agencies about businesses environmental assistance issues. Various local agencies and programs, including Fire, Buildings, Emergency Services, Solid Waste, Pretreatment, Air Quality and Water Conservation often conduct site visits or facility inspections at the same site. Some of the attempts to coordinate these visits and share data among programs have been unsuccessful. LINC was established to better coordinate information sharing among these agencies to save time and resources.

13 . Reference Library.

The County could develop, as needed, a reference library for businesses. The library would be used to research new technology regarding the reduction of material needed in processing or manufacturing; the replacement of hazardous products with non-hazardous or less hazardous products; the recycling of waste material; and disposal options to help businesses reduce expenses and to allow the County the opportunity to promote proper hazardous material management.

14. Other Educational Efforts.

The County should be aware of innovations in educational, informational and promotional materials, and should develop new programs (as needed) or augment existing MRW programs based upon this information.

Potential Economic Incentives for Reduction and Proper Handling: creating economic incentives to reducing the usage of hazardous products and the generation of hazardous waste.

15 *Point-of-Purchase Surcharges.*

The County could develop, as needed, a program which requires hazardous products pricing to include some or all of their associated MRW costs. This would provide manufacturers with a direct incentive to reduce product toxicity and encourage consumers to use less toxic alternatives. However, with the proximity of the Portland Metro area, economic incentives would have to be addressed on a regional basis.

16.Point-of-Disposal Charges.

The County could develop, as needed, a program which requires disposal charges as a direct user fee at the MRW facilities. This approach shifts some or all of MRW management costs to generators, instead of depending on general MSW fees to cross-subsidize MRW handling. While in theory these fees might encourage waste reduction to avoid MRW disposal charges, they could also cause hazardous materials to be redirected into the municipal solid waste stream or to be disposed of illegally or improperly.

17. Regulatory Fines.

The County could develop, as needed, a program which assesses regulatory fines to encourage compliance by businesses. For example, a SQG waste audit program could set fines for MRW found in solid waste containers. This approach conflicts with the voluntary nature of education and technical assistance programs.

18. Bounties.

The County could develop, as needed, a program which requires a "bounty" on certain moderate risk wastes to encourage drop-off participation by residents. For example, Skagit County placed a bounty of $0.05 on each household (dry cell) battery, when they were attempting to comply with incinerator emission standards. While this approach can be successful for some materials under some circumstances, there would be

disadvantages to implementing it in Clark County. Bounties can counteract surcharges that have been placed to encourage waste reduction; screening out ineligible generators could be difficult, and the County's location, across the river from Portland, would attract some materials from that area.

19. Tax Credits.

The County could develop, as needed, a program which provides a tax credit to businesses upon proper disposal of hazardous materials. The tax credit would be applied to local business and operating taxes. Setting up this system would require coordination with local taxing authorities.

20. Product Deposits and Taxes.

The County could develop, as needed, a program which requires a deposit to be placed on specific hazardous products. As of July 1, 1993, the County and cities in Washington State were legally able to place deposits on specific products or packaging, in order to create an incentive to buy less of a product or to return products for reuse or recycling. The deposit on beverage containers is the best known example. Washington State currently has deposits on automobile batteries; in the past, it has had deposits on tires. Any evaluation of local deposits in Clark County must also consider the Portland-metropolitan area's regional market.

Collection and Disposal Options: providing accessible locations to recycle, reuse or dispose of MRW.

21. Support MRW Reuse.

The County should support the development, as needed, of a MRW reuse program. Many MRW materials delivered for disposal can be reused, if the associated operational and liability issues are successfully addressed. If reusable materials were diverted through a MRW reuse program, then disposal costs would decrease. MRW reuse can be defined as the direct reuse of the product in its original container, without additional processing or handling. Island, Whatcom and Cowlitz Counties are just a few of the MRW programs that set aside reusable MRW for the public. Access is supervised and recorded to limit liability. This approach might be complicated in Clark County due to the use of a private contractor's site for the MRW facility. However, some potential for direct reuse might be feasible. A program similar to Portland Metro's "Pass It On" program may be possible. In their program, organizations, such as local governments, public schools, nonprofit group, and thrift organizations, request specific types of wastes or products, then recipients are contacted by Metro to arrange pick up, when the items become available.

22. Provide for MRW Disposal As Solid Waste .

Because of increased disposal costs if participation rates increase, it may be necessary to prioritize MRW that can be collected at the MRW facilities by toxicity, quantities, disposal costs or other criteria. The County should consider disposing of those materials not meeting the criteria for collection through the solid waste disposal system.

23. Material Exchanges.

The County could develop or support, as needed, a MRW material exchange program. Hazardous waste material exchanges are well established in the Pacific Northwest. Exchange services publish periodic lists of wastes, or products, available or wanted. After a connection is made through the waste exchange service, wastes are shipped directly between generator and user. This approach avoids the liability of centrally storing wastes from various generators and the risk that a particular material will not find a user. The County could financially or otherwise support a more local version of the exchange service.

24. Develop Cost Effective Recycling and Disposal Alternatives.

The County should pursue more cost-effective recycling and disposal by actively seeking alternatives or by adopting common and accepted alternative methods. Actively seeking alternatives requires staff to investigate new recycling opportunities, processing techniques and disposal alternatives. Alternatively, the expense and effort associated with evaluating alternative markets can be avoided by relying on other jurisdictions and private businesses to do the work, thus reducing technical staffing needs as well as associated liabilities if some disposal alternatives turn out to be inappropriate.

25. Adopt Disposal Bans.

The County could develop, as needed, a program which would require bans on the disposal of certain materials through the transfer stations as MSW as an incentive to reduce waste at the source or to separate it from garbage for collection at a hazardous waste collection facility. In Clark County, household hazardous wastes, such as oil based paint and other wood finishing products, pesticides, corrosive cleaners, automobile batteries and motor oil are already prohibited from disposal at the transfer stations by CRC. With adequate monitoring and enforcement at the transfer stations, other disposal bans could be implemented. Education and opportunities for appropriate disposal are necessary elements of this alternative.

26. Accept Additional Materials at MRW Collections.

The County's MRW program could be expanded to include additional materials such as light ballasts, oil filters, dry-cell household batteries, fluorescent bulbs, antifreeze. Candidate materials could be considered on the basis of toxicity, prevalence, new recycling opportunities or regulatory changes.

27. Increase the Number of Fixed MRW Collection Facilities.

The County should consider the development of additional fixed MRW collection facilities in conjunction with or separate from the development of additional solid waste transfer facilities. North and East County are both areas where additional fixed sites could be located.

28. Curbside Collection.

The County could consider the curbside collection of some HHW. Collecting HHW at the curb can pose risks from spills or the mixing of incompatible materials resulting in harm to humans, animals or the environment. There are private companies that provide on-call collection of HHW. These services have been contracted for in a number of cities in California and have served primarily elderly and disabled residents. Depending on costs, this may be a viable alternative for limited HHW collection.

29. Rural Used Oil Collection.

The County should continue to support the curbside collection of used motor, currently available to rural recycling subscribers, to increase the number of subscribers as well as the amount of oil being collected. The County should develop an education program, regarding used oil management and its relationship to drinking water and wells, directed at rural county residents, especially self-haulers.

30. Rural MRW Collections.

The County should continue the satellite MRW collection events in the rural areas of Clark County as is or expand the program to include additional sites. Educational efforts at the satellite events can target rural self-haulers as well as garbage collection subscribers.

31. Continue/Increase SQG Collections.

The County should continue to promote SQG collections at CTR and Philip Services Corporation. Other SQG collections should be added at other existing HHW facilities as needed. Another option may be for the County to make arrangements with Portland Metro to open their SQG facility to SQGs from Clark County. If regulations don't prohibit this option, it could provide a viable alternative. If additional collection opportunities are needed, a method to pay for collections must be established.

32. Continue/Increase HHW Collection.

The County should continue to support the existing collection programs at the two fixed facilities and new HHW education programs and publicity should be created about these HHW collection opportunities.

Program Monitoring And Evaluation: monitoring and evaluating programs and community needs with regard to MRW management.

33. Information/Data Study.

The County should develop a comprehensive study to obtain relevant information/data about both residential and small quantity generators within the County to determine:

- *public awareness of MRW alternatives and management options,*
- *amounts and types of MRW generated;*
- *numbers and types MRW generators of MRW;*
- *numbers and types of disposal options available, including costs;*
- *other information/data as deemed necessary.*

All information/data collected is to be used as a baseline for future planning and to provide the County with direction in implementing programs/actions which will be used to achieve the Goals as listed in this Chapter.

34. Program Monitoring.

The County should develop, as needed, a process to monitor the County's MRW collection program. A variety of options are available to help the County monitor costs and results of MRW programs. MRW program monitoring can be accomplished by examining data that includes the amounts of material collected and participation rates as well as user survey results.

35. Waste Stream Characterizations.

In addition to measuring quantities of waste accepted annually at each MRW facility, the County could continue to conduct waste stream characterizations, including the hazardous waste component and segregated by households and businesses. By comparing the data over time, the County would be able to evaluate whether education and collection programs are having an impact on the amount of moderate risk waste in the solid waste stream.

36. Assess Adequacy of Existing SQG Hazardous Waste Collection System.

The County should develop, as needed, a program to collect and track SQG hazardous waste generation and handling methods would need to be developed. Once information regarding handling methods is available, the County would be able to assess if the existing system is adequate to handle SQG hazardous wastes and whether additional collection options for SQG hazardous wastes are required.

Options to increase proper disposal of SQG hazardous wastes would need to be analyzed. One option would be to better publicize the existing service provided by Philip Services Corporation. Another option would be to encourage additional privately operated collection opportunities. The County could offer collection events, but a funding base for the events would need to be established first.

37. Database.

The County should develop and maintain, as needed, a comprehensive database of SQG waste generators. The maintenance of a SQG database would allow the County to target educational and promotional materials and events and evaluate whether current MRW management services are sufficient.

38. SQG MRW Management.

The County should monitor its SQG database to better understand SQG business patterns, gaps in services and educational programs that may need modifications. The County can then respond to these gaps by expanding education programs or considering modifications to existing MRW services.

Recommendations

The Solid Waste Advisory Commission reviewed the MRW Plan and the complete list of Alternatives. SWAC has highly recommended that Alternative #33 be implemented, before changes to the program's current activities occur. The results of the study will be used to provide the County with direction in implementing programs and actions that the study's results indicate are needed.

33. Develop a comprehensive study to obtain relevant information/data about both residential and small quantity generators within the County to determine:

- *public awareness of MRW alternatives and management options,*
- *amounts and types of MRW generated;*
- *numbers and types of generators of MRW;*
- *numbers and types of disposal options available, including costs;*
- *other information/data as deemed necessary.*

State law (RCW 70-105) requires that the County implement certain activities to meet the criteria of Local Hazardous Waste Plans. In order for the County to be in compliance with State law, these activities will continue to be implemented before and after the study. These activities are: managing generated MRW (including an assessment of quantities, types, generators and fate of HHW and MRW); ongoing public involvement and public education (including potential hazards to health and environment; proper methods of handling, reducing, recycling, and disposal; an inventory of existing generators and hazardous waste management facilities).

Until the study occurs, the County should continue to provide the current programs and activities. Current activities include:

2. Informational/Educational Materials
3. Workshops and Presentations
4. Chemical-Free Gardening
8. Technical Assistance Visits
12. LINC
23. Material Exchanges
29. Rural Used Oil Collection
30. Rural MRW Collections
31. Continue/increase SQG Collections
32. Continue/increase HHW Collections.

Current and new programs should continue to work to achieve the four basic goals of reducing use, proper storage, appropriate use and safe disposal.

These appropriate programs and actions may take the form of:

- Continuing to educate and inform the public about Moderate Risk Waste issues.

- Creating appropriate economic incentives to promote reducing the usage of hazardous products and the generation of hazardous waste.
- Continuing to provide accessible locations to recycle, reuse or dispose of Moderate Risk Waste.
- Using the knowledge gained from the comprehensive study to guide undertaking new programs and/or terminating old programs to most effectively meet the stated goals.
- MRW Program funding is addressed in The Funding Chapter (see Table 17-4).